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**071305T4EOP**

**ELECTRICAL OPERATION (POWER OPTION) LEVEL 5**

**ENG/OS/PO/CR/07/5/A**

**Perform Electrical Breakdown Maintenance**

**Nov/Dec 2024**

**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)**

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**PRACTICAL ASSESSMENT**

**INSTRUCTIONS TO THE ASSESSOR**

*You are required to mark the practical as the candidate performs the tasks.*

*Ensure the candidate has a name tag and registration code at the back and front.*

*Candidate is allocated THREE (3) hours to carry out given practical tasks*

*Perform the following alterations on the circuit before the start of the exam:*

1. *Interchange the connection of the equipment at the intake point to start with the energy meter*
2. *Interchange 4 terminations at the CCU and interchange MCB connections e.g. have the lighting circuit connected to the Cooker MCB*
3. *Create short circuit at the cooker terminal and L1*
4. *Create open circuits at L3 and S01*

**The question paper contains FOUR (4) printed pages**

| OBSERVATION CHECKLIST | |
|---|---|
| **Candidate's name** | |
| **Registration No** | |
| **Assessor's name** | |
| **Registration Code** | |
| **Unit(s) of Competency** | **Perform Electrical Breakdown Maintenance** |
| **Venue of Assessment** | |
| **Date of assessment** | |

*(Indicate the marks available and marks obtained respectively. Award marks appropriately as guided for in the items for evaluation indicated. Give a brief comment where necessary)*

| **Items to be evaluated:** | **Marks Allocated** | **Marks Obtained** | **Comments** |
|---|---|---|---|
| 1. Adhered to safety:<br>a. Safety boots. (*Award 1 or 0)*<br>b. Apron. (*Award 1 or 0)*<br>c. Handled tools properly. (*Award 2 or 0)* | <br>1<br>1<br>2 | | |
| 2. Observed color code *(Award 2 or 0)* | 2 | | |
| 3. Maintained a safe and clean working environment *(Award 3 or 0)* | 3 | | |
| 4. Adhered to waste disposal regulations *(Award 3 or 0)* | 3 | | |
| **Sub total** | **12** | | |
| **TASK 1** | | | |
| 5. Identified the different equipment and tools.<br>a. Wire stripper *(Award 1 or 0)*<br>b. Screwdrivers *(Award 1 or 0)*<br>c. Multimeter (*Award 1 or 0)*<br>d. Megger (*Award 1 or 0)*<br>e. Intermediate Switch (*Award 1 or 0)*<br>f. Two-gang two way switches(*Award 1 or 0)* | <br>1<br>1<br>1<br>1<br>1<br>1 | | |

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| | | | |
|---|---|---|---|
| **Sub total** | **6** | | |
| **TASK 2** | | | |
| 6. Drew wiring diagram as per layout diagram | | | |
| a. Lighting $(Award\ 6\ or\ 0)$ | 6 | | |
| b. Power Sockets $(Award\ 4\ or\ 0)$ | 4 | | |
| c. Cooker $(Award\ 4\ or\ 0)$ | 4 | | |
| **Sub total** | **14** | | |
| **TASK 3** | | | |
| 7. Identified faults correctly; | | | |
| a. Consumer intake point; $(Award\ any\ 4x1)$ | 4 | | |
| b. lighting circuit; $(Award\ any\ 2x1)$ | 2 | | |
| c. socket outlets circuit;$(Award\ any\ 2x1)$ | 2 | | |
| d. cooker circuit.$(Award\ any\ 1x1)$ | 1 | | |
| **Sub total** | **9** | | |
| **TASK 4** | | | |
| 8. Repaired connection at; | | | |
| a. Consumer intake point; $(Award\ 4\ or\ 0)$ | 4 | | |
| b. lighting circuit; $(Award\ 6\ or\ 0)$ | 6 | | |
| c. socket outlets circuit;$(Award\ 4\ or\ 0)$ | 4 | | |
| d. cooker circuit.$(Award\ 3\ or\ 0)$ | 3 | | |
| **Sub total** | **17** | | |
| **TASK 5** | | | |
| 9. Correct tests and functionality | | | |
| a. Continuity test *(Award 3 or 0)* | 3 | | |
| b. Polarity test *(Award 3 or 0)* | 3 | | |
| c. Insulation resistance test *(Award 3 or 0)* | 3 | | |
| d. Functionality restored *(Award 5 or 0)* | 5 | | |
| **Sub-total** | **14** | | |
| **TASK 6** | | | |

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| | | | |
|---|---|---|---|
| 10. Prepared maintenance report<br>a) Reported on the condition of installation before repair<br>b) Reported on the diagnosis of installation<br>c) Reported on the repair procedure<br>d) Reported on the tests done after repair<br>e) Reported on the results tests done after repair<br>f) Reported on the final condition of the installation<br>*(Award 2 marks each)* | 2<br>2<br>2<br>2<br>2<br>2 | | |
| **Sub-total** | **12** | | |
| **GRAND TOTAL** | **84** | | |
| **Percentage $\frac{x}{84} \times 100$** | | | |

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| | | |
|---|---|---|
| **The candidate was found to be:** Competent ☐ Not yet competent ☐<br>*(Please tick as appropriate)*<br>***(The candidate is competent if s/he gets 50% or higher*** | | |
| **Feedback from candidate:** | | |
| **Feedback to candidate:** | | |
| **Candidate's signature:** | **Date:** | |
| **Assessor's signature:** | **Date:** | |